FIVE NEW TAXA OF NEW WORLD MEMECYLEAE (MELASTOMATACEAE)[1]

THOMAS MORLEY[2]

ABSTRACT

Three new species and one subspecies of *Mouriri* are described, with one new species of *Votomita*. *Mouriri peruviana* and *Votomita pubescens* occur in northeast Peru, *Mouriri pranceana* is from the elevated regions of southeast Pará and north Mato Grosso, Brazil, and *M. viridicosta* is from French Guiana. Relations of the first three are clear but *M. viridicosta* has no close relatives and does not fit well in any of the existing sections of the genus. *Mouriri cearensis* subsp. *carajasica* is a distinct inland form of the species.

New species of the Memecyleae (Melastomataceae) from the New World tropics are still discovered occasionally, usually where little-collected regions are explored more intensively but sometimes as with *M. viridicosta* through continued collecting in a relatively well-known country like French Guiana. The tribe is known well enough by now so that new discoveries can usually be placed to genus, subgenus, and section with certainty, but sometimes an exception appears, and *M. viridicosta* is one of these. This species has no known close relatives and its sectional affinities are in doubt. The other three species present no real problems. *Mouriri peruviana* is a western relative of *M. nervosa,* a widespread species of Amazonia. *Mouriri pranceana* is a close relative of *M. huberi* recently discovered through explorations of the Serra do Cachimbo and nearby regions; the new species is most readily distinguished by its fruit. *Votomita pubescens* is a seventh species of that genus, from farther west than the other species; it is the only known member of the tribe in the New World with a pubescent lamina.

Mouriri peruviana Morley, sp. nov. TYPE: Peru. Dpto. Huánuco: Prov. Pachitea, Dtto. Honoria, Bosque Nacional de Iparia, Región de "bosque seco tropical" (sensu Tosi, 1960) a lo largo del Río Pachitea cerca del campamento Miel de Abeja (1 km arriba del pueblo de Tournavista o unos 20 km arriba de la confluencia con el Río Ucayali). En bosque alto en el caserio Miel de Abeja a 2 km del campamento de Iparía. Altura sobre el mar 300–400 m. Arbusto 4–6 m, flores blancas con sépalos de color amarillo palido. "Sachavaca Shahuinto." 23 June 1967, *Schunke V. 2077* (holotype, F; isotype, US). FIGURE 1.

Frutex vel arbor usque 15 m alta; folia 11–25 cm longa; calyx ovarium inferum includens 6–8.5 mm longus; calyx 1.5–1.8 mm findens et productens inter lobos sub anthesi, lobi 1.5–2.5 mm longi ab staminibus, 3.5–5 mm lati post anthesin; antherae 4.3–4.5 mm longae; distantia ab basi styli ad stamina 3.6–4.8 mm; loculi ovarii 5, late separati, ut videtur intra basim hypanthii; placentae parietales in quoque loculo; lobi fructus 9.5–14 mm diam.; semina 9–12 mm diam.

Shrub or tree to 15 m high; young twigs rounded-quadrangular, not winged. Petioles 2–4 mm long; blades coriaceous, intensely green or yellowish green, 11–25 cm long, 5.7–8.5 cm wide, oblong, oblong-elliptic, or oblong-ovate, abruptly acuminate at the apex, rounded to cordate at base with a notch 2–8 mm deep; midrib plane above, prominent below with a flattened lower surface and short wings; lateral nerves obscure to moderately prominent above and below when dry. Midrib xylem tubular; stomatal crypts Type III (see Morley, 1976), averaging in a leaf 42–52 μm diam., 23–28 μm high, 95–108 per mm^2 (extremes 31–71 μm diam., 20–32 μm high, 89–141 per mm^2); upper epidermis one cell thick, most of the cells with mucilaginous walls; hypodermis none; terminal sclereids stellate, the central bodies relatively large, round to rectangular, seldom short-branching, with several to many short usually sharp arms. Inflorescences at leafless nodes of twigs 3–7 mm diam., 1–4 per side, each usually branching near the base, forming a dense cluster, each 1–9-flowered, 4–12 mm long to base of far-

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thest pedicel measured along the axes and with 2–3 internodes in that length; bracts triangular to ovate-triangular, 1.6–2 mm long, 1.8 mm wide, mostly deciduous by anthesis or shortly after. True pedicels 5–10 mm long, to 13 mm in fruit; calyx including inferior ovary 6–8.5 mm long, cup-shaped, the 5 locules widely separated and appearing as if in the base of the hypanthium and bulging somewhat externally; apparent free hypanthium as measured from style base to stamen attachments 3.6–4.8 mm; sepals yellowish green to pale yellow, 1 mm long, 2 mm wide, triangular, 1.5–2.5 mm long when measured from stamen attachment, stretching and splitting apart a further distance of 1.5–1.8 mm at anthesis, the sepals then 3.5–5 mm wide. Petals white. Filaments 7–9 mm long; anthers 4–4.5 mm long; sporangia 4–4.4 mm long, dehiscing by apical pores; gland 0.7–0.9 mm long, 2.5–2.8 mm from apex of anther when measured from center of gland; cauda none. Placentae parietal-basal in each of the 5 locules, the ovules 5, borne on all sides of a short parietal-basal column, ca. 25 in all; style ca. 16–18 mm long. Fruit consisting of 3–5 subglobose lobes independently attached to the old hypanthium and calyx, the lobes sometimes contacting each other but not laterally fused, reddish orange, 9.5–14 mm diam., 1-seeded or rarely 2-seeded, each lobe developed from 1 locule of the ovary. Seeds brown, polished except for the large hilum, irregularly spheroid, 8.5–10.2 mm high, 9.8–12 mm wide, 6–8 mm thick, with a small rounded hump on the polished side and a larger one on the hilum side, the hilum occupying all of one side except for a broad extension of the polished surface which curves over and down on the hilum side for ¼–⅓ of the height of that side.

Paratypes. PERU. LORETO: open woods, Masisea, 275 m, (fr) 25 July 1929, *Killip & Smith 26845* (F, NY, US); Coronel Portillo, Bosque Nacional de von Humboldt, Km 86, Pucallpa-Tingo Maria road, 270 m, Arboretum and adjacent carretera de extración, 75°00′W, 8°40′S, (fr) 7 Aug. 1980, *Gentry & Salazar 29438* (US). SAN MARTÍN: high ground in forest SE of house, Don Diogenes del Aguila, E of Aguaytia between Pucallpa Road and Río Aguaytia, (defl, fr) 28 June 1960, *Mathias & Taylor 5006* (F); Prov. Mariscal Caceres, Dtto. Tocache Nuevo, high forest SE of airport of Tocache Nuevo, 400 m, (fr) 10 Jan. 1970, *Schunke V. 3685* (F, US); Rio de la Plata, 1 km abajo de Tocache (margen derecha del Río Huallaga), (fr) 29 July 1974, *Schunke V. 7879* (US); 12 km W of Tocache Nuevo, near Río Tocache, mature flatland forest on lateritic soil, 500 m, 76°32′W, 8°10′S, (buds) 13 Mar. 1979, *Gentry, Schunke V. & Aronson 25651* (US).

Distribution. High forest to open woods in central Peru in the departments of Loreto, San Martin, and Huanuco in the drainages of the Huallaga and Ucayali Rivers at elevations of 270 to 500 m.

Mouriri peruviana is very simlar to *M. nervosa,* differing from the latter mostly in the greater size of its parts. The leaves of *M. peruviana* are somewhat larger than those of *M. nervosa,* the pedicels are somewhat longer, the calyx including the inferior ovary is larger, the calyx lobes are longer as measured from the stamen attachment, the anthers are longer and with a different shape, the lobes of the fruit and the contained seeds are larger, and the seeds have a different shape.

Although most of these are differences of size, the new plants are considered to represent a species rather than a subspecific taxon of *M. nervosa* because of the gaps between the size-ranges of the calyx and ovary, anthers, fruit lobes, and seeds in the two taxa, and because differences of shape are also seen in the anthers and seeds. The geographic range is also very distinct. Previously I mistook the collection *Killip & Smith 26845* to be *M. nervosa.* When this plant is properly recognized as *M. peruviana* the nearest *M. nervosa* is about 1,000 km to the east.

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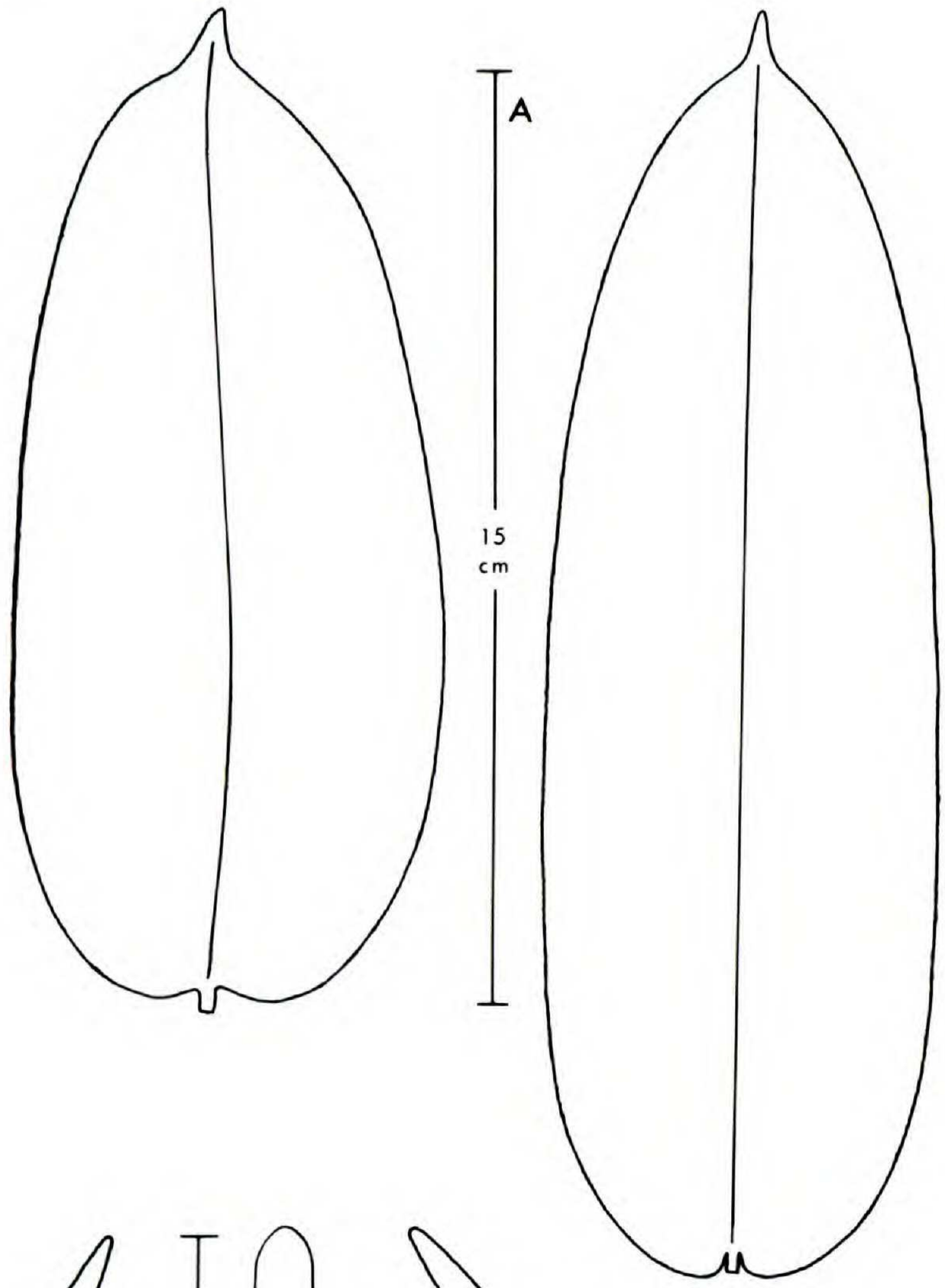
FIGURE 1. *Mouriri peruviana.*—A. Leaves.—B. Cleared portion of leaf blade showing terminal sclereids and veins (*Mathias & Taylor 5006*).—C. Cross section of leaf blade showing upper epidermis, sclereids, and stomatal crypts (*Killip & Smith 26845*).—D. Cross section of leaf midrib (*Killip & Smith 26845*).—E. Inflorescence (*Schunke 2077*).—F. Long section of flower, before anthesis (*Schunke 2077*).—G. Anther, shown cleared except for the sporangia (*Schnuke 2077*).—H. Fruit (*Schunke 7879*).—I, J. Seed (*Schunke 7879*).

FIGURE 2. *Mouriri pranceana.*—A. Leaves.—B. Cleared portion of leaf blade showing terminal sclereids and veins (*Prance et al. 25263*).—C. Cross section of leaf blade showing upper epidermis, sclereids, and stomatal crypts (*Prance et al. 25263*).—D. Cross section of leaf midrib (*Prance et al. 25263*).—E. Inflorescence (*Prance et al. 25263*).—F. Long section of flower, before anthesis (*Prance et al. 25263*).—G. Anther, shown cleared except for the sporangia (*Prance et al. 25263*).—H. Petal (*Prance et al. 25263*).—I. Fruit (*Pires 16105*).—J. Seed (*Pires 16105*).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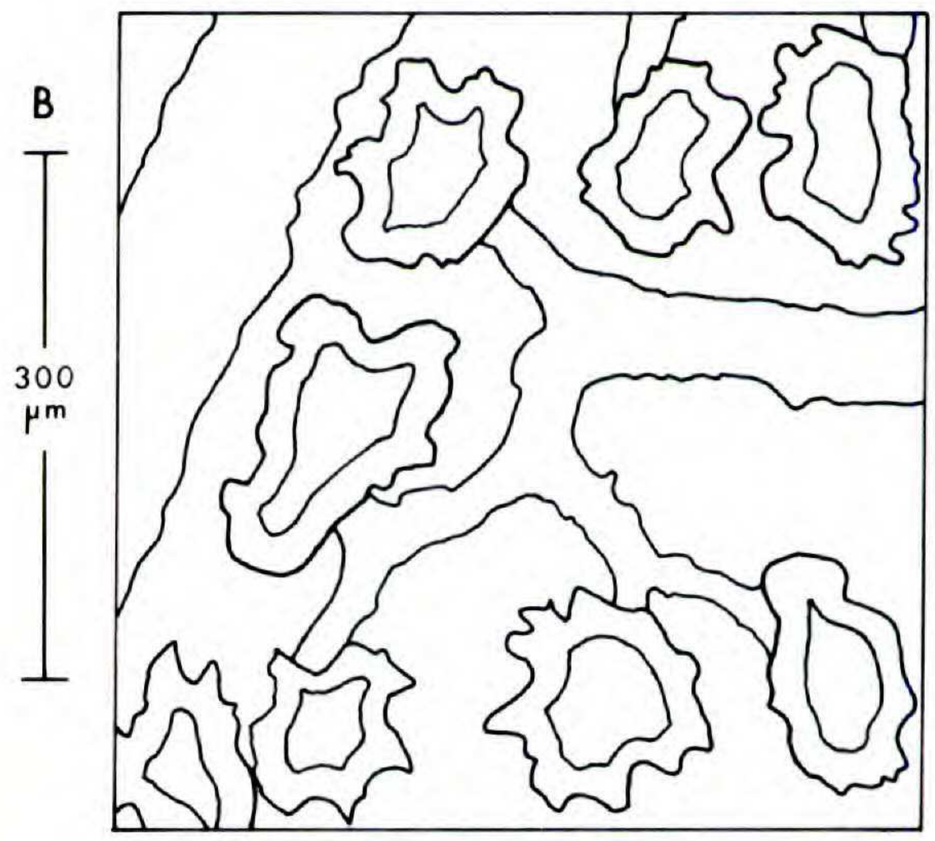
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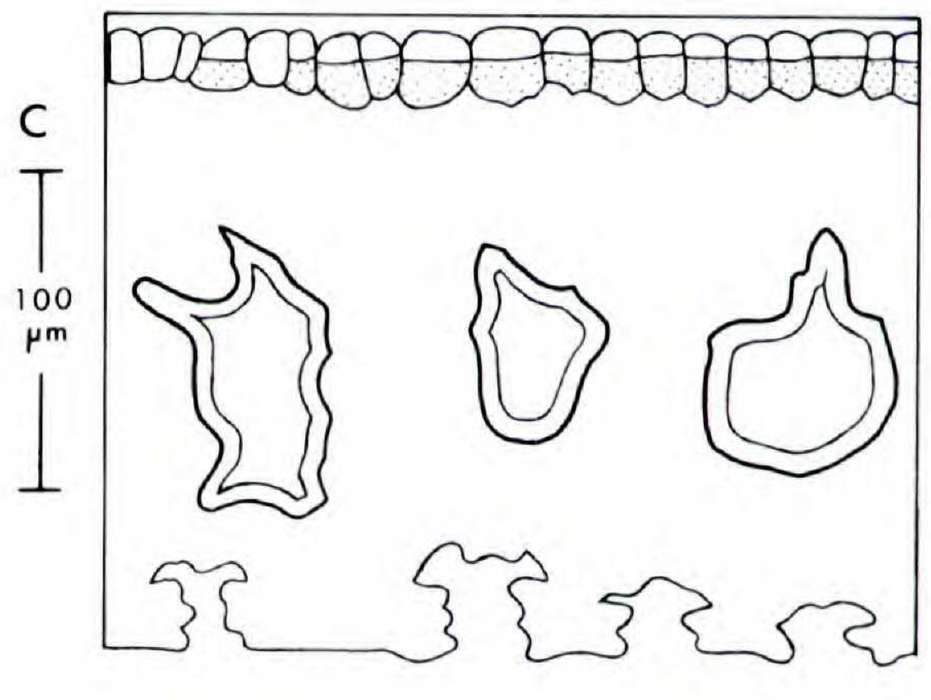
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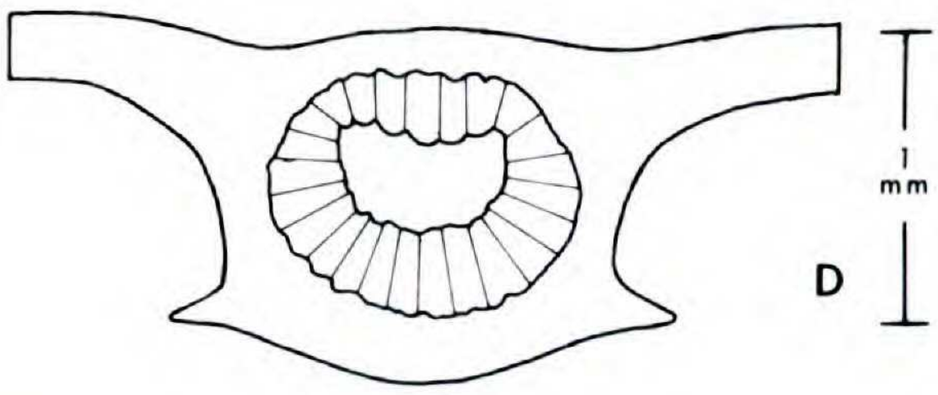
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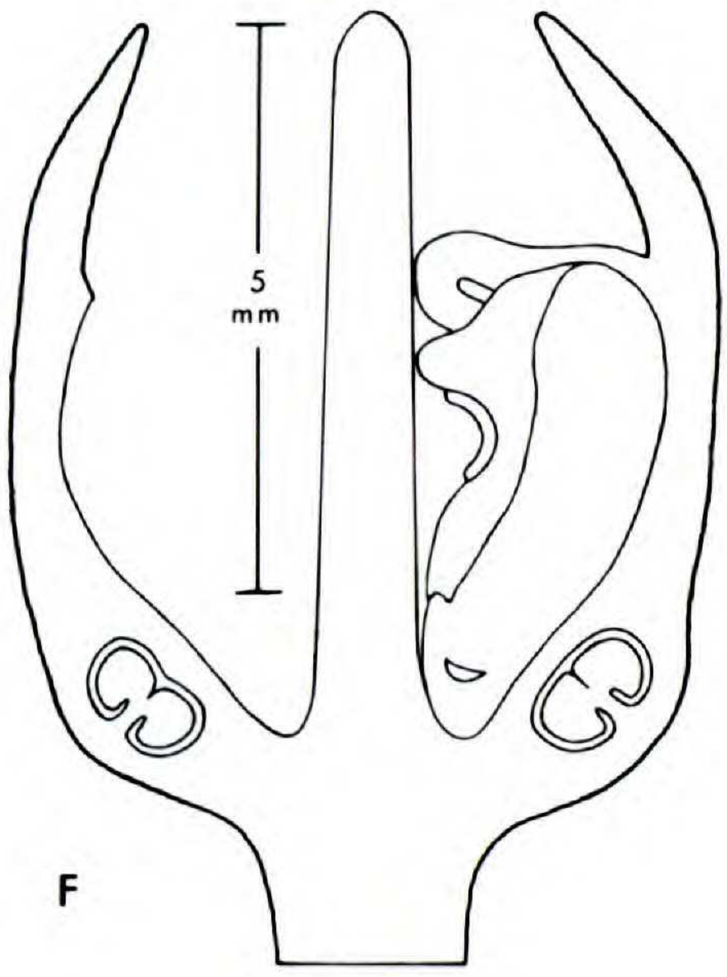
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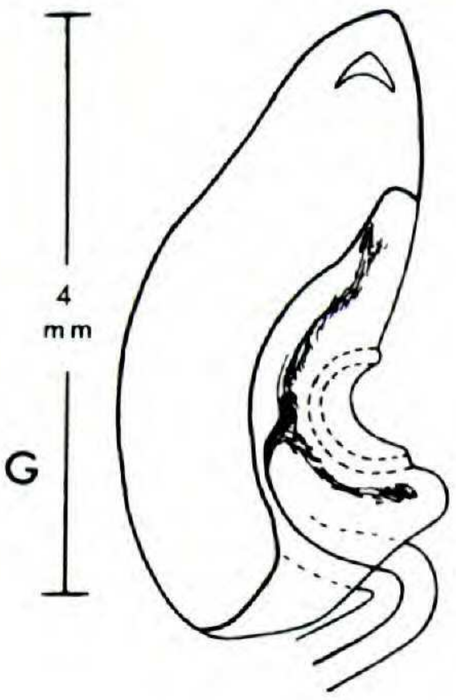
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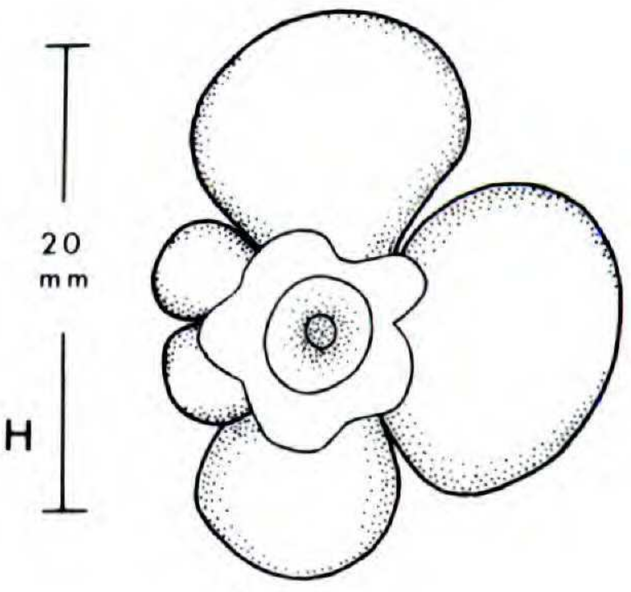
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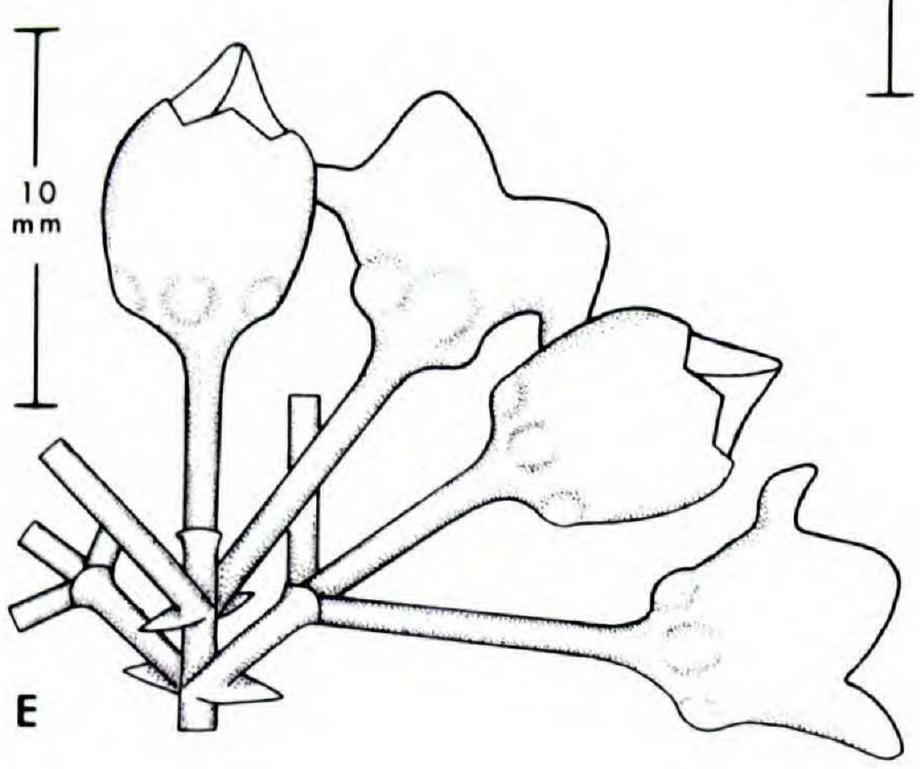
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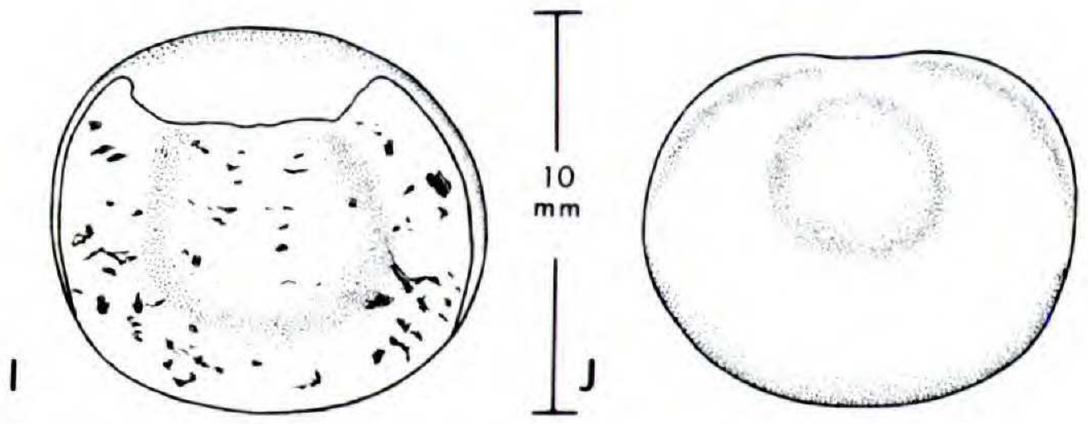
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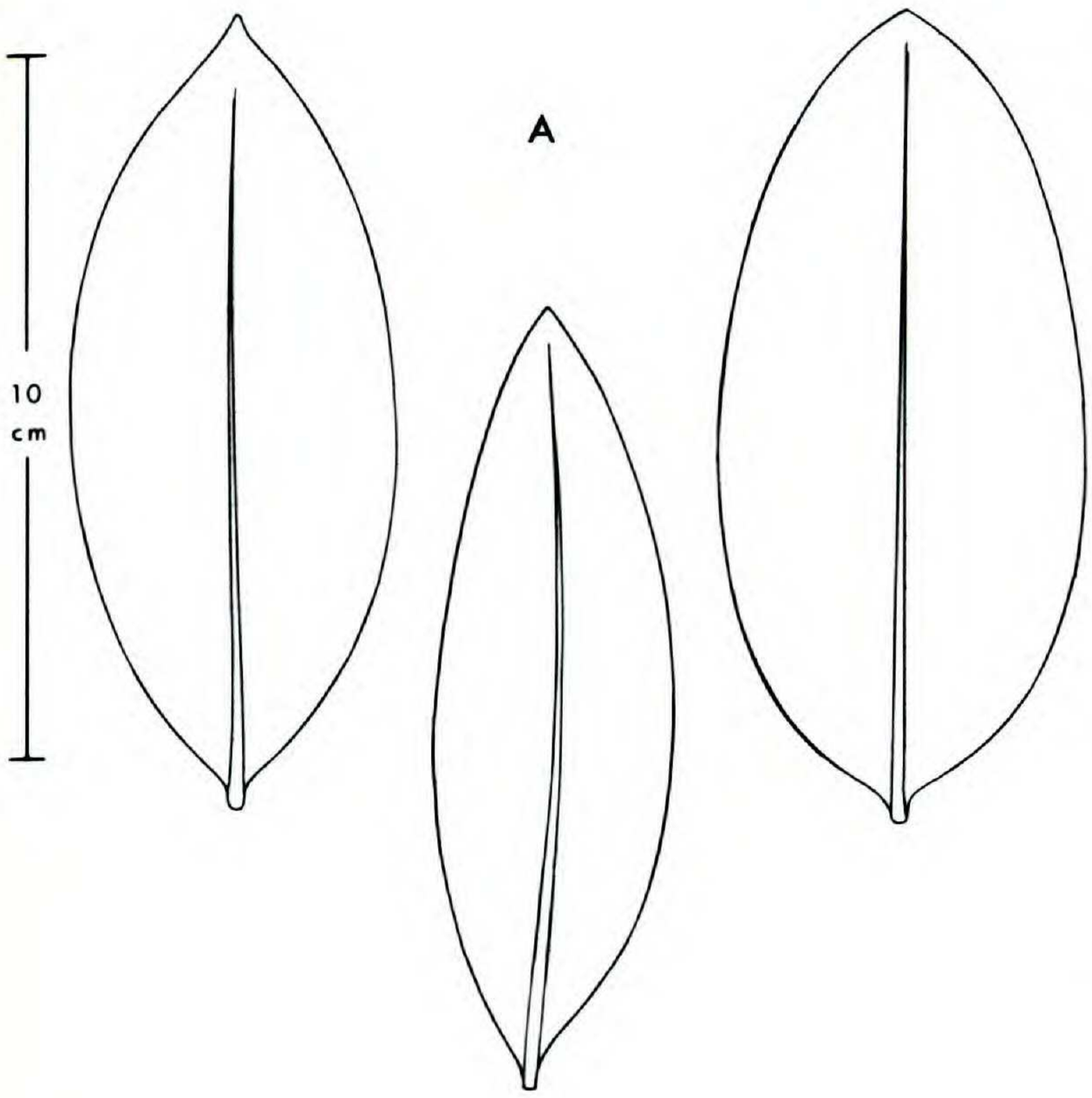
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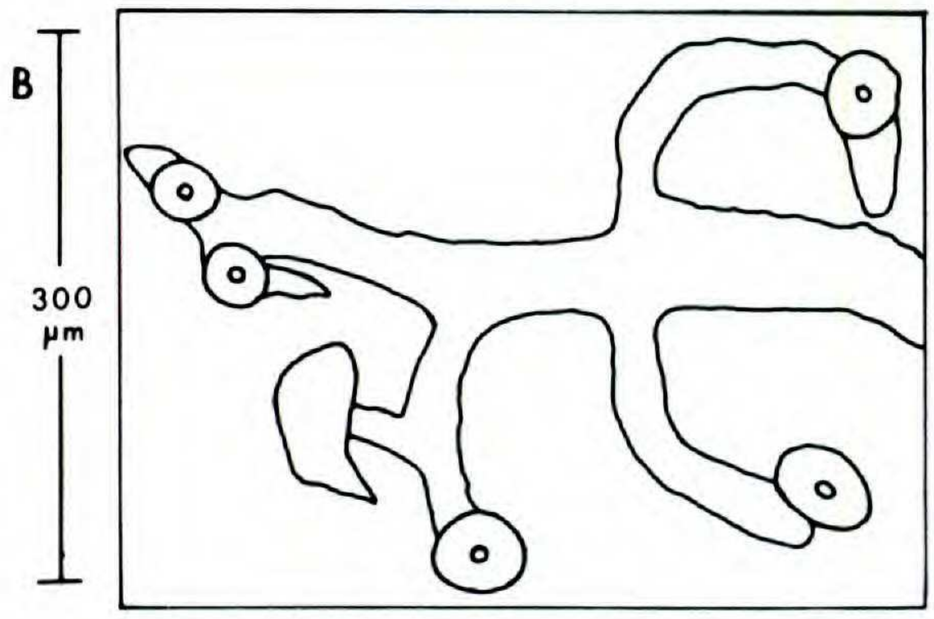
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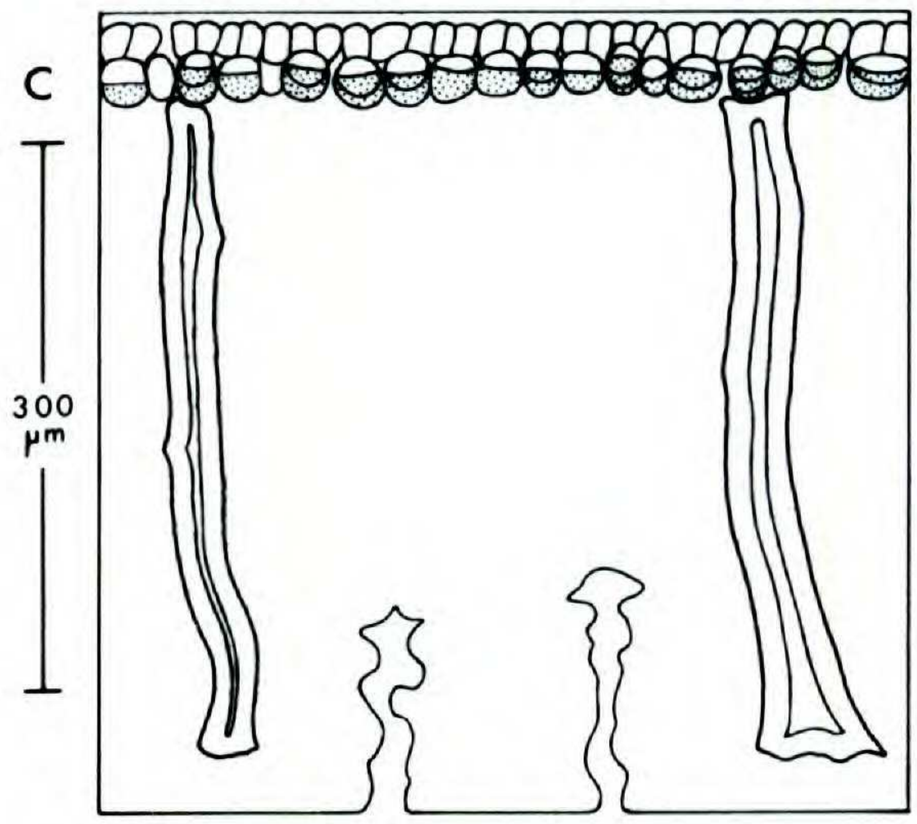
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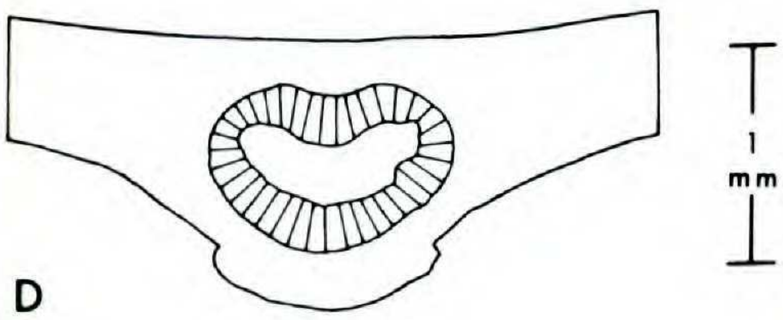
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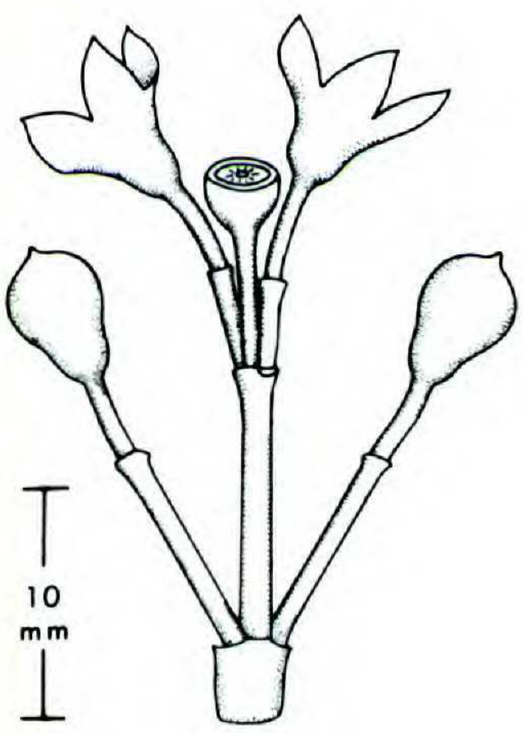
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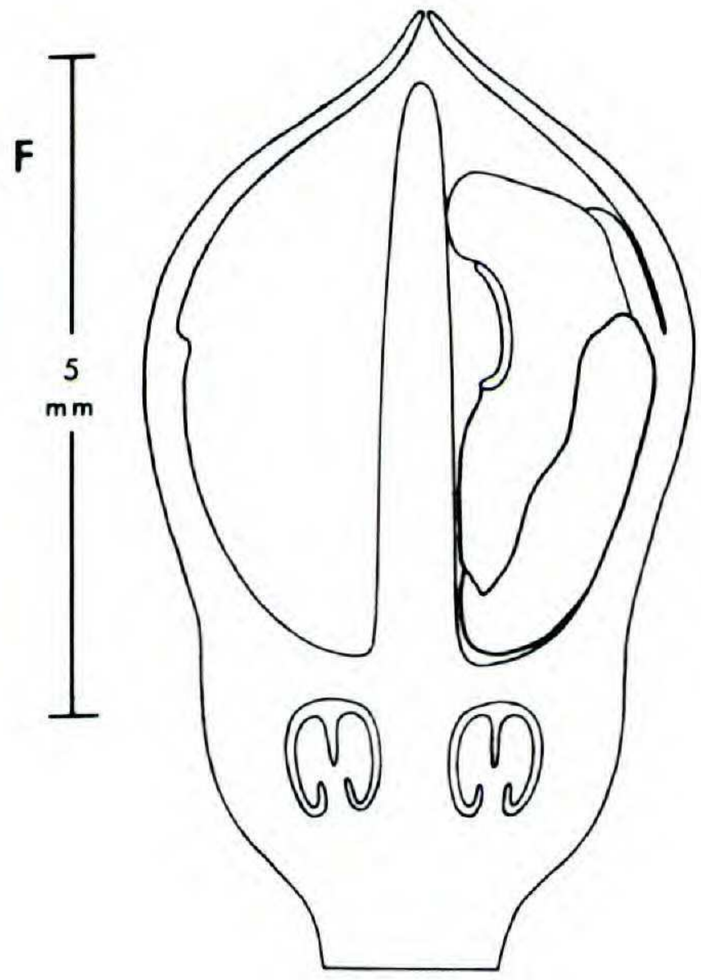
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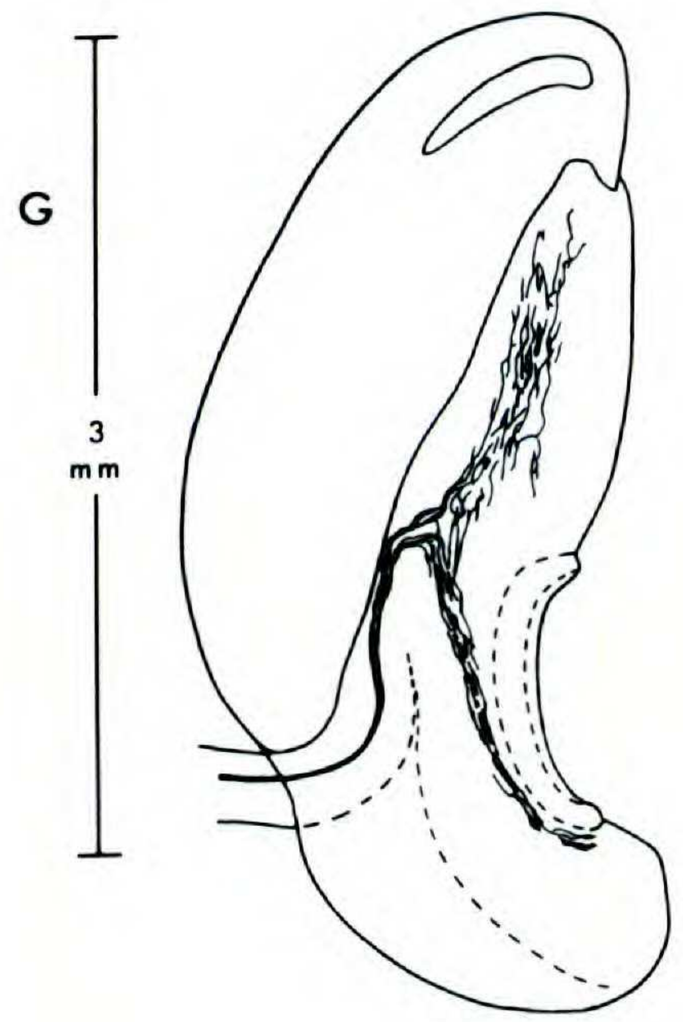
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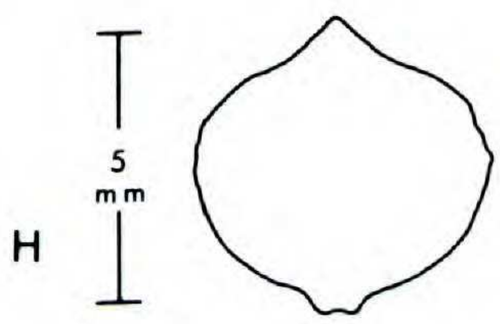
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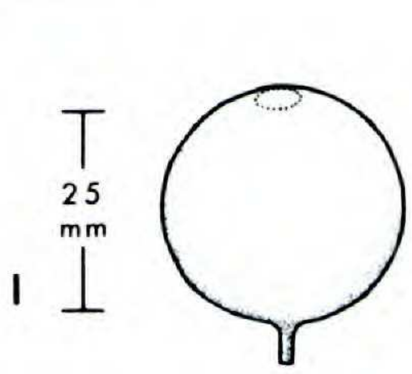
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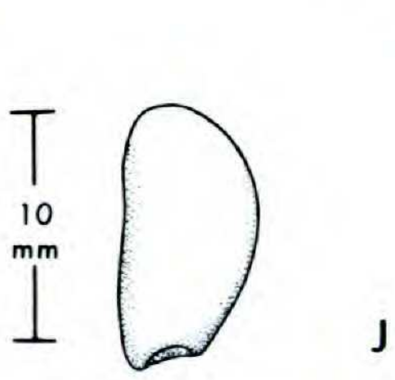
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Mouriri peruviana is also somewhat similar to *M. angustifolia,* a close relative of *M. nervosa* from the east-central border of Colombia. *Mouriri angustifolia* has still smaller leaves than *M. nervosa,* Type II crypts instead of Type III, shorter pedicels, smaller flowers and flower parts, and only three ovules per locule in the ovary.

The new species has sometimes been mistaken for *M. cauliflora* because the flowers of the latter are also rather large. However, *M. cauliflora* has a smooth lamina when dry, a prominently rounded midrib above with a groove on each side, and columnar foliar sclereids; the ovary locules of the ovary do not bulge outwardly in the flower, and the fruits and seeds are smaller. *Mouriri cauliflora* does occur in Peru, in Maynas and Requena Provinces of Loreto, but has not yet been found in the range of *M. peruviana.*

Mouriri pranceana Morley, sp. nov. TYPE: Brazil. Mato Grosso: Serra do Cachimbo, Cuiabá-Santarém highway, BR 163, Km 764, 15 km S of Mato Grosso/Pará border, 520 m. Disturbed campina forest. Tree 3 m; petals white. 12 Nov. 1977, *Prance, Silva, Berg, Henderson, Nelson, Balick, Bahia & dos Santos P 25263* (holotype, MG; isotype, US). FIGURE 2.

Frutex vel arbor usque 5 m alta; laminae apice acuto vel abrupte et brevissime acuto; superficies costae mediae plana; lobi calycis in alabastro connati, secedentes sub anthesi; hypanthium liberum circumscissum ca. 0.5 mm supra basim; ovarium 5-loculare; placentae basilares in quoque loculo, ovula circiter 4–5 undique circum quamque placentam genita; fructus subglobosus; cicatrix calycis 5.4–6.5 mm diam., laevis, non depressa, vix manifesta; hilum seminis 2.2–2.8 mm longum, 1.8–2 mm latum.

Shrub, or tree to 5 m high, glabrous except for the inflorescence; young twigs rounded, with 2 shallow channels on opposite sides. Petioles 3–5 mm long; blades coriaceous, with a dull shine when dry, 8.5–12 cm long, 3.3–5.2 cm wide, ovate-elliptic to elliptic or narrowly so or these slightly oblong, broadly to medium acute or abruptly very short acute at the apex, rounded to broadly or medium acute at base, the blade abruptly short-attenuate on the petiole; midrib flat above or occasionally with a slight narrow central groove, prominent below, low-rounded near the petiole, becoming 2-angled 1/6–1/4 of the way to the apex or very narrowly 2-winged; lateral nerves invisible to slightly visible above and below when dry. Midrib xylem tubular; stomatal crypts a highly modified Type II, averaging in a leaf 40–50 μm diam., 115–131 μm high, 69–120 per mm² (extremes 30–65 μm diam., 105–141 μm high, 54–135 per mm²); upper epidermis varying with the thickness of the leaf, in the thinner leaves being mostly 2 cells thick, rarely one, in thicker leaves 2 or 3 cells thick; conspicuous mucilaginous walls usually present in the cells contacting the palisade and also in the middle cells when the epidermis is 3 cells thick; hypodermis none; terminal sclereids columnar, narrow, sometimes with several short radiating branches at the epidermises. Inflorescences at leafless nodes of twigs to 7 mm thick or sometimes axillary, 1 per side, each 3–9-flowered, 14–23 mm long to base of farthest pedicel measured along the axes and with 2–3 internodes in that length; bracts early deciduous, unknown. Pedicels and at least the upper internodes of the inflorescence glabrous or very minutely puberulent. True pedicels 2.5–7 mm long; calyx including inferior ovary 6–8 mm long dry, to ca. 8.5 mm long fresh; calyx lobes fused to the apex of the flower in bud, splitting apart regularly at anthesis, each then ovate-triangular and acute, 3–3.8 mm long, 2.5–3 mm wide; free hypanthium 2.3–2.6 mm long measured to middle of the stamen attachment; calyx circumscissile a bit irregularly in the free hypanthium ca. 0.5 mm above the base after anthesis. Petals white, sometimes with a red line on the center of the exterior, broadly elliptic and acute, nearly sessile, ca. 5.4 mm long, 5.3 mm wide; mature filaments unknown; anthers yellow, 3.1–4 mm long; sporangia 2.4–3.3 mm long, dehiscing by apical slits; gland 0.8–1 mm long, 2.1–2.6 mm from apex of anther when measured from center of gland; cauda 1–1.5 mm long. Ovary 5-locular; placentae basal in each locule, the ovules borne on all sides of a short basal column, (3–)4–5 per placenta, 20–25 per ovary; mature style unknown. Fruit yellow and edible when ripe, tart when green, subglobose,

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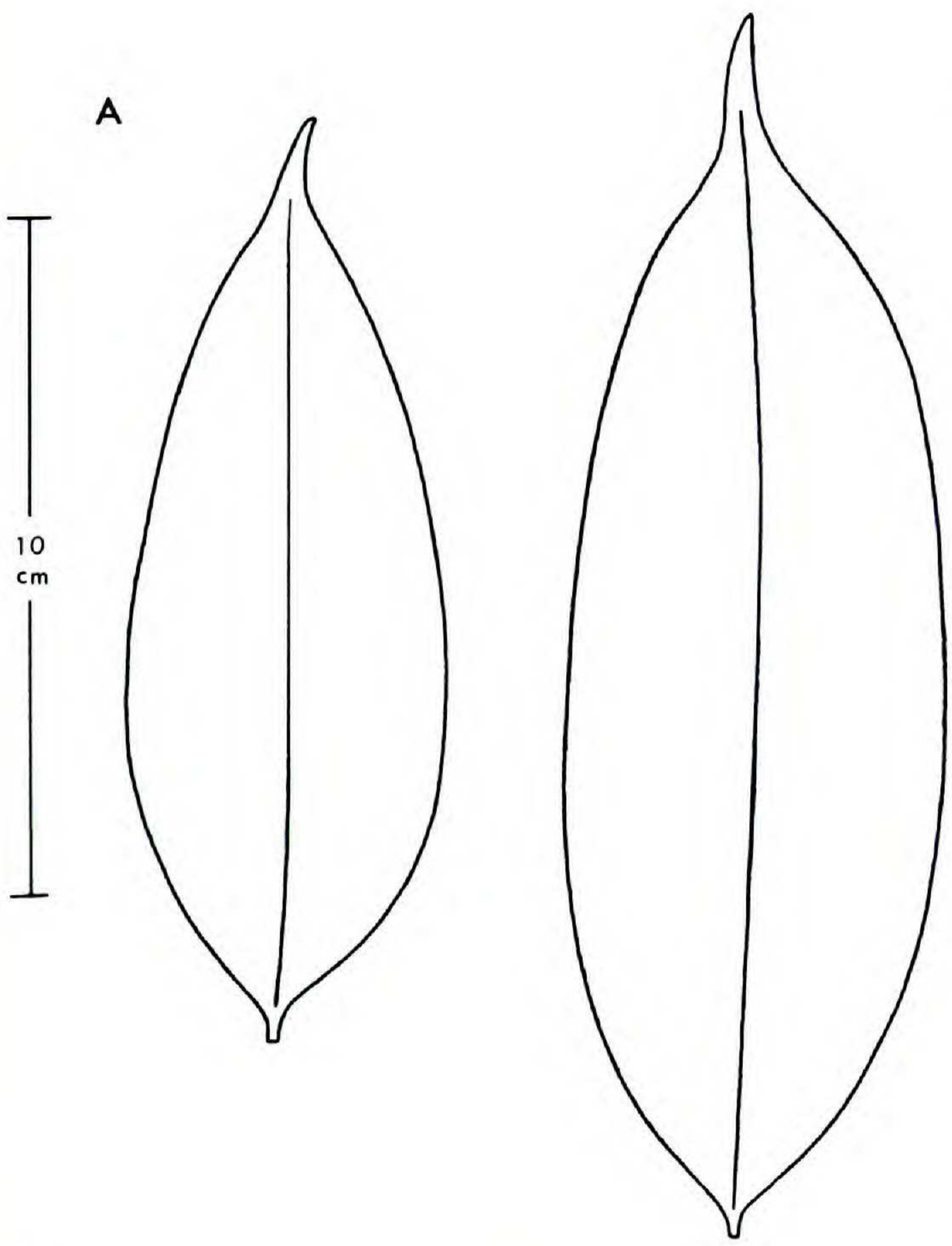
FIGURE 3. *Mouriri viridicosta* (*Lescure 834*).—A. Leaves.—B. Cleared portion of leaf blade showing terminal sclereids and veins.—C. Cross section of leaf blade showing upper epidermis and sclereids.—D. Cross section of leaf midrib.—E. Flower.—F. Long section of flower, before anthesis.—G. Inflorescence.—H. Fruit.—I. Seed.—J. Anther, shown cleared except for the sporangia.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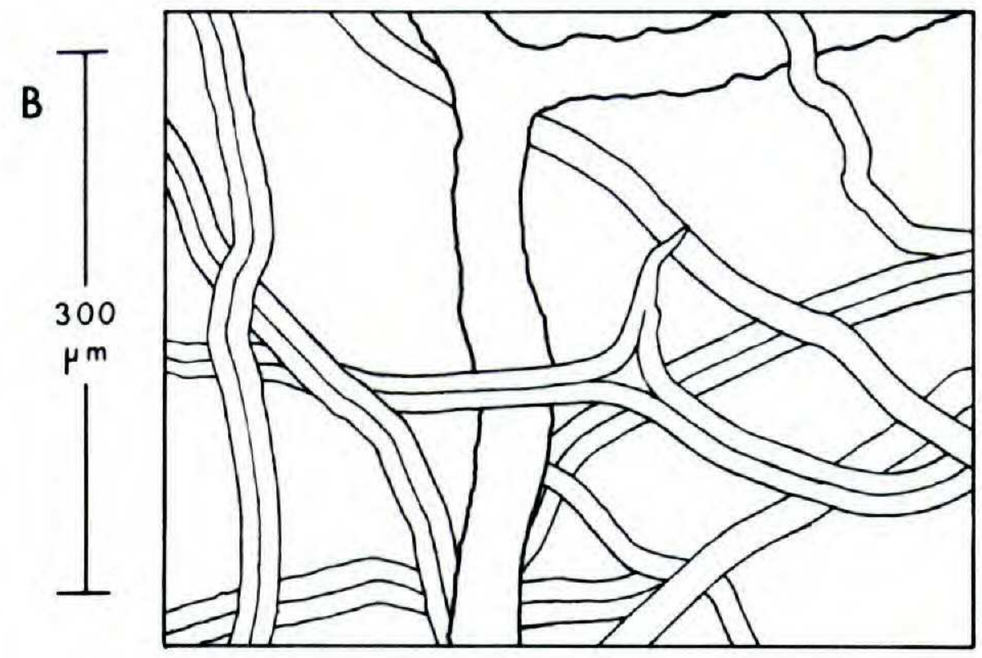
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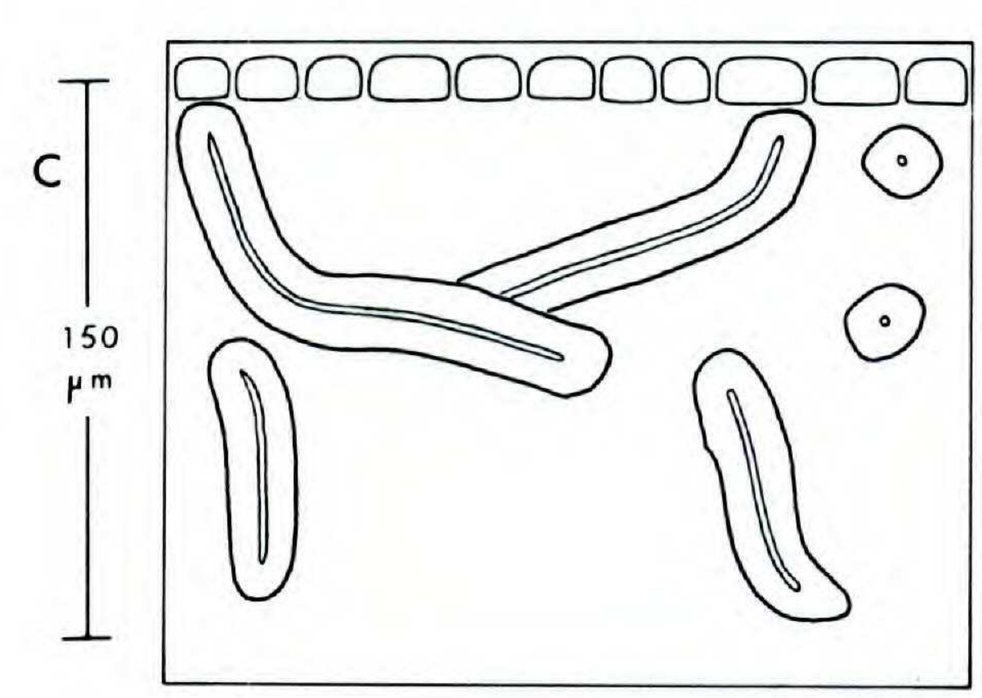
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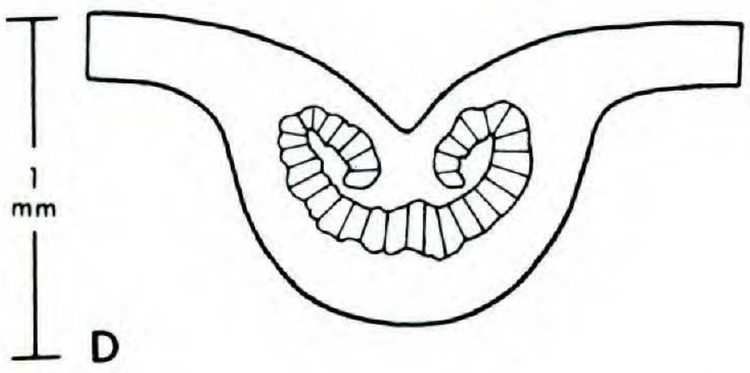
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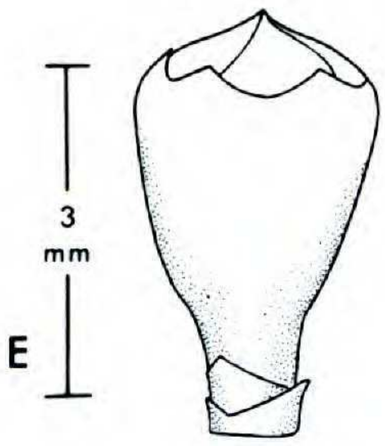
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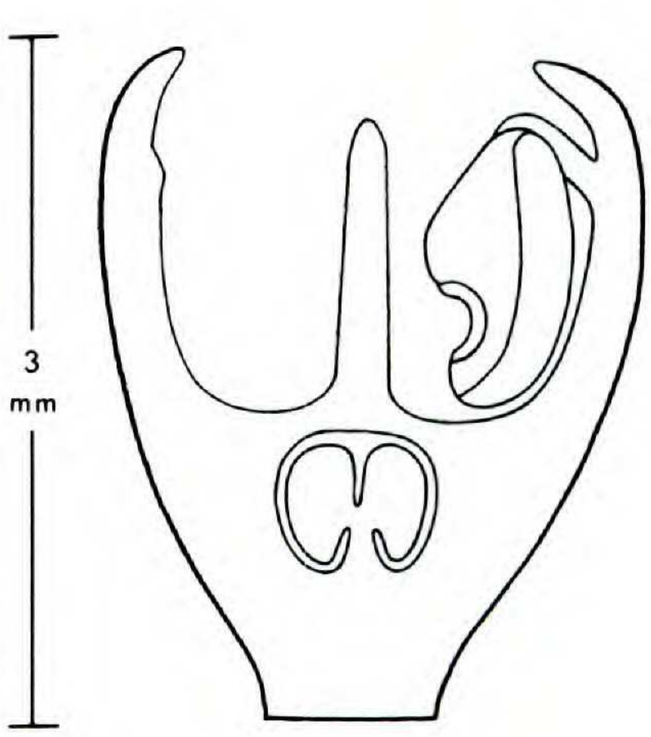
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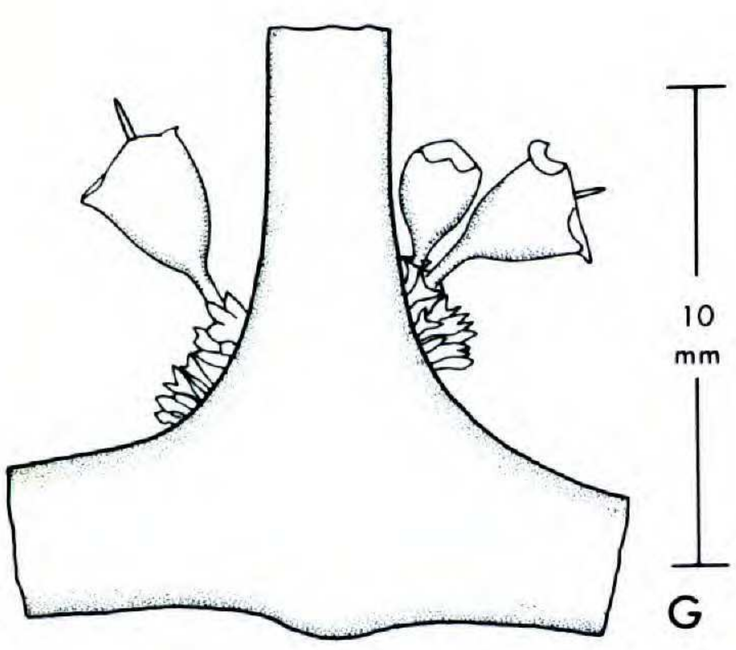
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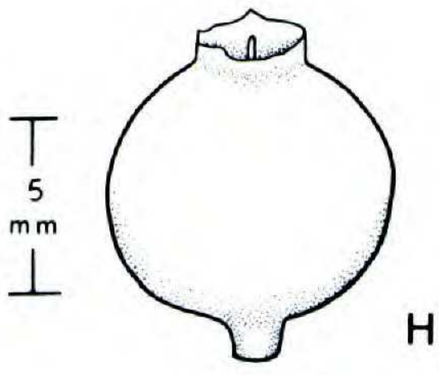
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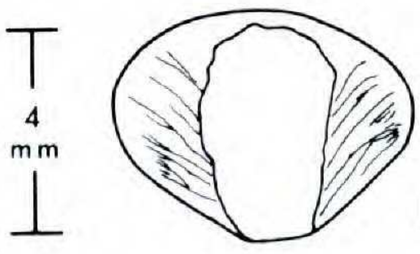
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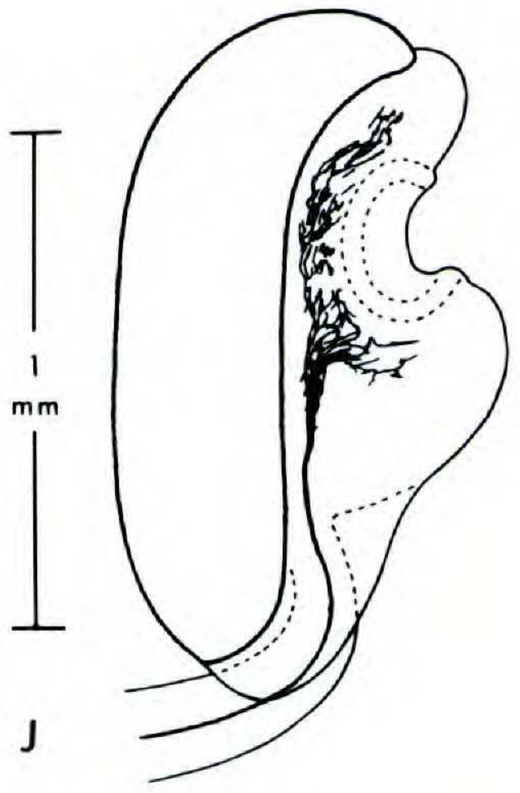
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estimated ca. 28 mm diam., with a smooth round calyx scar 5.4–6.5 mm diam. that is scarcely visible. Seeds 5 in the fruit examined, dark brown and polished, narrowly and irregularly ellipsoid, 12.8–12.9 mm long, 6.8–7.6 mm wide, 6.7–7.4 mm thick; hilum basal, angled slightly upward away from the center of the fruit, irregularly roundish in shape, 2.2–2.8 mm long, 1.8–2 mm wide.

Paratypes. BRAZIL. PARÁ: Serra do Cachimbo, BR 163, Cuiabá-Santarém highway, Cachoeira de Curuá, rocky terrain, 300 m, (bud, fr) 4 Nov. 1977, *Prance et al. P 24831* (US); Serra do Cachimbo, BR 163, Cuiabá-Santarém highway, Km 879, 2 km from Rio Curuá, low forest on terra firme, (fl) 11 Nov. 1977, *Prance et al. P 25189* (RB, US); alto Xingú, Fazenda Rio Dourado, R. Dourado afluente do R. Fresco, ca. 52°W, 8°S, mancha de savana pedrogosa no alto de morro, (fl, fr) 28 June 1978, *Pires 16105* (NY).

Distribution. Low forest to savanna to disturbed campina forest, often rocky, in southern Pará and adjacent Mato Grosso from the Serra do Cachimbo to the Xingu drainage at elevations from 300 to 520 m.

Mouriri pranceana clearly falls in the small section *Huberophytum,* owing largely to characters of the calyx and ovary. The calyx lobes are fused for their length in the bud and separate regularly at anthesis, the hypanthium is circumscissile post anthesis, and the placentation is typical for the section. Within *Huberophytum, M. pranceana* is distinct from *M. elliptica* and *M. cearensis* on the basis of habitat, habit, and leaf form and structure, but it closely resembles the remaining species, *M. huberi.* From the latter it differs chiefly in its fruit, which is roundish with a small smooth calyx scar. The smooth scar apparently results from the fact that the hypanthium is circumscissile at its base, leaving little tissue on top of the enlarging ovary. In *M. huberi* the hypanthium is circumscissile ½–⅔ of the way from the base to the stamen attachment, leaving on the developing fruit a ring of tissue which becomes a broad circular inward-pointing rim 0.5–1 mm high. Apparently there is less expansion at the end of the developing fruit in *M. pranceana* than in *M. huberi,* and thus a smaller scar is produced in the former.

Other distinguishing features of the new species in comparison to *M. huberi* are the former's more acute blade apex and less grooved midrib above, its thicker leaves with higher stomatal crypts and more strictly columnar sclereids, its longer pedicels and larger calyx including the inferior ovary, its larger petals and anthers, its greater number of ovules, and its smaller seeds and hilum at least in the few examples checked.

It is a pleasure to name this plant for Dr. Prance, wide-ranging collector in Amazonia.

Mouriri cearensis Huber subsp. **carajasica** Morley, subsp. nov. TYPE: Brazil. Pará: Serra dos Carajás, Serra do Norte, ca. 20 km N of AMZA Exploration Camp (ca. 6°S, 50°15′W). In liana forest. Tree 15 m by 25 cm; corolla white. 18 Oct. 1977, *Berg, Henderson & Bahia BG 615* (holotype, MG; isotypes, MICH, NY, US).

Petioli alati 4.5–9 mm longi; laminae petiolis 11–17 plo longiores; lobi calycis 2.4–2.9 mm longi in sicco, ca. 2.6–3.2 mm longi in vivo; cicatrix calycis 4–6.5 mm diam. in fructu.

Tapering winged petiole 4.5–9 mm long, the lamina 11–17 times as long as the petiole; calyx lobes 2.4–2.9 mm long when dry, 2.6–3.2 mm long boiled and probably when fresh; calyx scar on dried fruit 4–6.5 mm diam.; seeds 9.5–11 mm high with a slight constriction about ⅓ of the way above the base, mostly dark brown above and below the constriction and medium brown at the constriction, the hilum 4–5 mm long, 2–3 mm wide.

Paratypes. BRAZIL. PARÁ: Serra dos Carajás: Marabá, caminho para o azul, bosquinho do aeroporto, (immature fr) 3 April 1977, *Silva & Bahia 3034* (NY, US); Serra Norte near AMZA Exploration Camp (ca. 6°S, 50°15′W), low forest on edge of steep slope, ca. 600 m, (fl) 11 Oct. 1977, *Berg & Henderson BG 469* (NY, US); vicintiy of AMZA headquarters, forest on terra firme, (fr) 17 Oct. 1977, *Silva et al. AS 43* (MICH, NY); Serra do Norte, ca. 20 km N of AMZA Exploration Camp, in liana forest, (fr) 19 Oct. 1977, *Berg & Henderson BG 638* (MICH, NY).

Distribution. Low forest or liana forest on terra firme in the Serra dos Carajás in southeast Pará, Brazil, at elevations of ca. 300 to 500 m.

Subspecies *cearensis* has the following contrasting characters: winged petiole 2–5.5 mm long, lamina (14–)18–30 times as long as the petiole, calyx lobes 3–3.8 mm long when dry, 3.2–4 mm long when boiled, calyx scar on dry fruit 7.5–10 mm diam., seeds 10.7–12.5 mm high, without a constriction, medium brown, the hilum 4–5 mm long, 3–3.4 mm wide.

Subspecies *cearensis* occurs near the coast in Ceará, Piaui, and Maranhão, disjunct nearly 600 km from the new subspecies, as the distributions are now known. Although subsp. *carajasica* is

distinct in morphology as well as being isolated geographically, in my estimation it is best regarded as a subspecies because there is little or no gap between the differing character-ranges of the two taxa and because of the great overall similarity in leaf anatomy, flower, and fruit in the two.

Mouriri viridicosta Morley, sp. nov. TYPE: French Guiana. St. Georges de l'Oyapock: Foret près de la Crique Gabaret. Arbuste de 6 m. Feuilles opposées à nervation peu visible. Fleurs fanées à calice jaune. Petits fruits jaunes. Nom local: Palikur: Bitkut kamwi. 22 Dec. 1978, *Lescure 834* (holotype, US; isotype, CAY; note on US label says *Lescure 834* = *Oldeman B2731*). FIGURE 3.

Frutex 6 m altus; pagina inferior costae mediae foliae in sicco viridis; xylema costae mediae canaliculatum, non tubulare; sclerides foliorum filiformes; cryptae stomatophorae nullae; pedicelli 0.5–1.5 mm longi; calyx ovarium inferum includens 2.5 mm longus; ovarium 1-loculare, ovula 4; fructus 6.2–7.9 mm diam., stylo persistenti; semen 1, ca. 5 mm longum, 6.4 mm latum.

Shrub 6 m high; young twigs terete, gray. Petioles 1.5–2 mm long; blades 11–17.7 cm long, 3.3–5.6 cm wide, elliptic-oblong to ovate-oblong or elliptic-ovate-oblong, abruptly acuminate at the apex, acute at base; midrib grooved above, rounded below; lateral nerves faintly to moderately visible above when dry, faintly visible below; blade including the underside of the midrib a medium green when dry. Margins of the leaf midrib xylem extended and turned in and down but not fused to each other; stomatal crypts none; upper epidermis one cell thick; hypodermis none; mucilage walls none; free stone cells present only at base of midrib; terminal sclereids filiform, occasionally branching; tanniniferous compounds lacking. Flowers 1–several in crowded clusters at leafless nodes of twigs to 3 mm diam., the flowers 1 per peduncle, the peduncle ca. 0.5 mm long with a pair of short triangular bracts at top and bottom, the bracts 0.7–0.8 mm long. True pedicels 0.5–1.5 mm long; calyx including inferior ovary 2.5 mm long, campanulate, glabrous; calyx yellow; free hypanthium 1.2 mm long; calyx lobes low-triangular, 0.3–0.5 mm high, 1.2–1.4 mm wide, not separating further at anthesis. Mature petals unknown. Mature filaments unknown; anthers 1.2–1.4 mm long; sporangia 1.1–1.3 mm long, their mode of dehiscence unknown; gland 0.2–0.3 mm long, placed ca. 0.4 mm below the apex of the anther; cauda none. Ovary 1-locular with 4 ovules arranged around a short central and basal placenta; style 2.8–3 mm long. Fruits yellow, subglobose, 5.7–6.2 mm high, 5.9–6.7 mm diam. when dry, estimated 7–8.5 mm diam. when fresh, crowned with the remains of the hypanthium and calyx and with the persistent style. Seed 1, ca. 5 mm high, 6.4 mm wide, 2 mm thick, the polished center part (the enlarged outer face of the ovule) ca. 2.3 mm wide, the rest of that face of the seed wrinkled irregularly with subparallel lines radiating away and upward from the polished center.

Distribution. Known only from the type locality in tropical forest near the Oyapock River in east French Guiana at about 40 m elevation.

The seed of *M. viridicosta* unmistakably places this species in the subgenus *Taphroxylon,* where its non-tubular midrib xylem also fits best. However, within this subgenus the new plant has no close relatives. Even its section is uncertain. The evergreen habit, short pedicel, single tiny flower, and seed structure exclude it from section *Abundiflos.* The lack of tannins and the form and structure of the anther are agreeable with section *Taphroxylon,* but this relation is disputed by the limited distribution of the free stone cells and by the filiform sclereids, very short pedicel, tiny flower, and separate calyx lobes.

Of the present sections the new species is most at home in *Brevipedillus.* The limited distribution of the free stone cells, very short pedicel, tiny flower, and separate calyx lobes are all matched in this section, and even the filiform sclereids are approached in *M. duckeana* and *M. duckeanoides.* However, the lack of tannins and the anther form and structure are discordant.

To some extent the new species breaks down the boundary between *Taphroxylon* and *Brevipedillus.* A case could be made for placing it in a section of its own, since the fully filiform sclereids, small number of ovules, persistent style, and small fruit and seed are unique in the subgenus. However, because the majority of the known distinguishing characters for sections fall into an existing section, I am inclined to view *M. viridicosta* as an aberrant member of section *Brevipedillus* until further evidence indicates otherwise.

The persistence of the style on the fruit was known previously only in *Votomita monantha*; I had thought this might be a generic character for *Votomita,* but was mistaken.

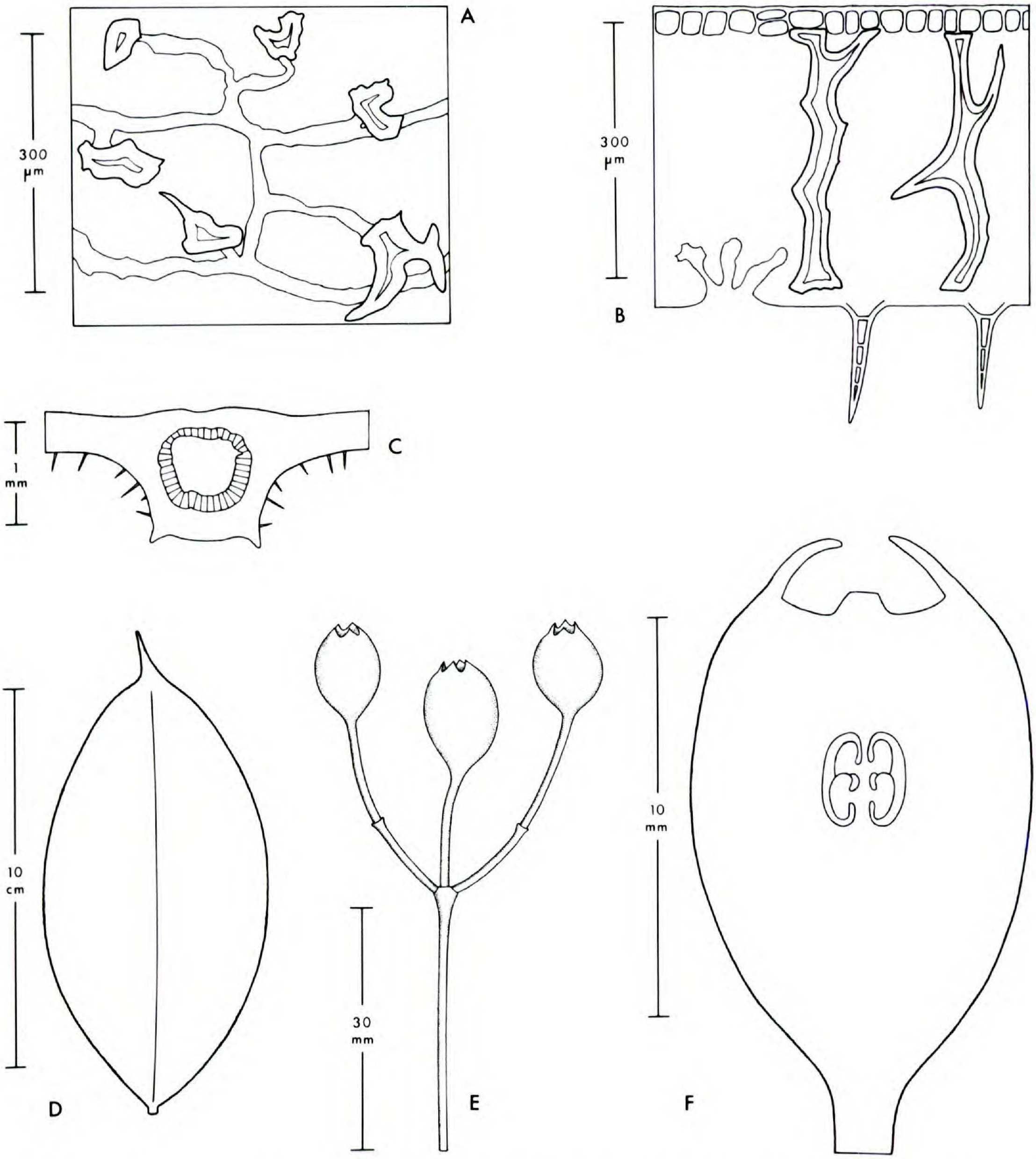

FIGURE 4. *Votomita pubescens* (*Lao M. 22*).—A. Cleared portion of leaf blade showing terminal sclereids and veins.—B. Cross section of leaf blade showing upper epidermis, sclereids, stomatal crypts, and hairs.—C. Cross section of leaf midrib.—D. Leaf.—E. Inflorescence.—F. Long section of flower.

Votomita pubescens Morley, sp. nov. TYPE: Peru. Loreto: Requena, Sapuena, Jenaro Herrera, 120 m. Collection from the Dep't. of Forest Management, Natl. Agric. Univ. at La Molina, Lima. Tree number R-D12 JH. "Lanza caspi." Arbol; bosque humedo tropical. 1970, *Rafael Lao M. 22* (holotype, F). FIGURE 4.

Arbor; folia supra glabra, subtus pubescentia; scleride foliorum terminales et columnares; sepala 4; ovarium 10.3–13.3 mm longum, tantum parvum contractum in sicco, in sicco laeve, induratum, olivaceum, duplo crassius ad placentas quam ad apicem, 2-loculare, placentis 2 in quoque loculo.

Tree. Petiole 5–6.5 mm long; blades 12–14 cm long, 5.8–6.5 cm wide, elliptic or slightly elliptic-ovate, abruptly caudate at the apex with a cauda 11–13 mm long, medium acute at base, glabrous above, pubescent beneath; midrib nearly plane above but with a slight groove down the center,

prominent below, the latter part rounded at base but soon 2-angled with 2 very narrow wings for its length, pubescent on the sides; lateral nerves not visible above or below when dry. Stomatal crypts multiple, each branched above the mouth into 2–7 small cavities, the multiples 90–175 μm total diam., 65–87 μm deep, averaging 35 per mm²; upper epidermis mostly 1 cell thick, occasionally 2, of large square cells as seen in section; mucilaginous walls none; hypodermis none; foliar sclereids terminal, irregularly columnar, usually with an irregular short-branched central body and a dendroid branching system against each epidermis; hairs 80–190 μm long, apparently 1-celled but with 1–6 septae and an expanded base set in the epidermis. Peduncles axillary, 1 per side, each 2–3-flowered, 19–27 mm long to base of farthest pedicel measured along the axes and with 1 or 2 internodes in that length; bracts unknown, deciduous before anthesis. True pedicels 8–10 mm long; flowers 4-merous; calyx including inferior ovary 10.3–13.3 mm long, 7.8–9 mm thick, glabrous, shrinking only slightly on drying, when dry with a hard smooth somewhat polished olive green outer layer, the ovary about twice as thick at the midpoint as at the apex; calyx lobes separate, 0.9–2 mm long, 2.4–2.7 mm wide, triangular and slightly apiculate, not separating further at anthesis. Petals and stamens unknown. Ovary 2-locular, each locule with 2 axile placentas and an irregular very incomplete ridge running down the outer wall representing a missing partition; ovules 5–6 per placenta; style unknown, apparently deciduous at anthesis. Fruit and seed unknown.

Distribution. Known only from the type locality in a humid tropical forest in northeast Peru in the drainage of the Ucayali River at an elevation of 120 m.

The previously known species of *Votomita* form two groups, three species (*V. plerocarpa, V. monadelpha, V. orbinaxia*) with (3–)4 locules and 36–48 ovules and three species (*V. guianensis, V. orinocensis,* and *V. monantha*) with one locule and 5–10 ovules.

The new species falls in between these groups, because it has two locules (with two placentas in each) and 20–24 ovules. It is not similar to any of the other six. However, it is doubtless closest to the first group because of the four placentas and the fact that two of the first group (*V. plerocarpa* and *V. monadelpha*) have pubescent midribs, although not laminas. From the latter two species *V. pubescens* differs in its columnar terminal sclereids as well as in the characters that set it apart from all the other six species: the pubescent lamina, the ovary that is twice as thick at the midpoint as at the apex and that is smooth and hard when dry, and the two locules with a total of 20–24 ovules.

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